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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,585	11/13/2003	Shlomo Ovadia	42P18108	2000

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EXAMINER

SEDIGHIAN, REZA

ART UNIT	PAPER NUMBER
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2613

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/713,585

Applicant(s)

OVADIA ET AL.

Examiner

M. R. Sedighian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-35 is/are allowed.
- 6) ☒ Claim(s) 1-3, 21-23 and 36-38 is/are rejected.
- 7) ☒ Claim(s) 4-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/13/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3 and 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Xiong et al. (US Patent No: 6,671,256 B1).

Regarding claim 1, Xiong teaches a method comprising: dynamically discovering an available lightpath route (col. 2, lines 13-25) comprising a concatenating of a plurality of lightpath segments (light path segments of network 100 and 120 in fig. 2) connected via respective nodes (NET 1, E1, C1, C2, C3, C4, E2, NET 2, fig. 2) along a route spanning from a source edge node (NET 1, fig. 2) to a destination edge node (NET 2, fig. 2) and including at least one switching node (110, fig. 2 and col. 6, lines 25-27) in an optical switched network (100, fig. 2); generating a lightpath reservation message (col. 7, lines 22-35 and 705, fig. 7) containing an explicit route corresponding to the available lightpath route that was discovered (col. 7, lines 8-21) and a scheduled time slot during which network resources are to be reserved (col. 4, lines 66-67, col. 5, lines 1-15, col. 6, lines 25-30 and 330, fig. 3 and 535, fig. 5); and reserving resources (col. 4, lines 65-66, the data channel paths that are in the process of being reserved) along the explicit route to enable transmission of data between the source and destination nodes along the explicit route during the scheduled time slot (col. 5, lines 1-15, col. 6, lines 25-30), wherein reservation of the resources causes the switching node (110, fig. 1) and the source (NE1, fig. 1) and destination edge nodes (NE2, fig. 1) to be configured so as to form a virtual optical-switched

circuit between the source and destination edge nodes during the scheduled time slot (col. 6, lines 13-32, col. 8, lines 43-60).

Regarding claim 2, Xiong further teaches the optical switched network comprises a photonic burst switched network (col. 2, lines 26-30, col. 6, lines 25-28).

Regarding claim 3, Xiong further teaches the optical burst switched network comprises a wavelength-division multiplexed network (col. 3, lines 5-20, 37-39 and figs. 1, 2).

Regarding claim 21, Xiong further teaches a partial use of a network resource may be reserved (col. 9, lines 60-65).

Regarding claim 22, Xiong further teaches the partial use comprises a bandwidth percentage use of a lightpath segment (col. 9, lines 62-63).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Xiong et al. (US Patent No: 6,671,256 B1) in view of Sahasrabuddhe et al. (US Patent Application Publication No: 2002/0159114 A1).

Regarding claim 23, Xiong differs from the claimed invention in that Xiong does not disclose the lightpath route is dynamically discovered using a modified version of the Open Shortest Path First (OSPF) protocol based on updated link state information. Xiong discloses the reservation method can be combined with a layer 2 protocol like MPLS to establish a label

switched path with bandwidth reservation (col. 9, lines 58-60). Sahasrabuddhe discloses a method and apparatus for routing signals through an optical network (page 1, paragraph 0002) by employing a routing protocol, such as the Open Shortest Path First protocol (page 3, paragraph 0051). As it is taught by Sahasrabuddhe, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a routing protocol, such as an Open Shortest Path First protocol, for the routing protocol in the optical transmission network of Xiong to provide an efficient routing method for transferring information between network nodes through the shortest paths.

5. Claim 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fumagalli et al. (US Patent No: 7,092,633 B2) in view of Mishra (US Patent Application Publication No: 2002/0186433 A1).

Regarding claim 36, Fumagalli teaches a method of routing data comprising: maintaining a routing table identifying applicable routes to route data between an edge node apparatus and other nodes in an optical switched network (see abstract, col. 10, lines 5-10); maintaining link availability information corresponding to a future availability of link and node resource in the optical switched network (col. 3, lines 18-29, col. 10, lines 14-16); selecting a lightpath route from the routing table for which a lightpath reservation during a scheduled time slot is to be made (col. 10, lines 17-20, 25-27), wherein the lightpath route spanning from the edge node apparatus to a destination node and including at least one switching node in the optical switched network (col. 3, lines 49-67, col. 4, lines 1-5, col. 10, lines 7-9 and 40, fig. 2); verifying sufficient resources are available to support the lightpath reservation based on the link

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availability information (col. 3, lines 33-37, col. 10, line 18); generating a lightpath reservation message explicitly identifying the selected route (col. 3, lines 37-40, col. 10, lines 25-27); and forwarding the light path reservation message to a first hop node along the selected route (col. 3, lines 37-40, col. 10, lines 23-24). Fumagalli differs from the claimed invention in that Fumagalli does not specifically disclose a machine-readable medium to provide instruction, which when executed by a processor to perform the method of routing data, as discussed above. Mishra teaches a machine-readable medium (page 5, paragraph 0059) to provide instruction, which when executed by a processor to perform a method of routing and switching in an optical communication network (page 2, paragraph 0021). As it is taught by Mishra, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a machine-readable medium such as the one of Mishra to provide instructions, which when executed by a processor to perform the method of routing of data in the communication network of Fumagalli providing a system and method for configuring lightpaths in an optical network.

Regarding claim 37, Fumagalli teaches receiving link state information indicative of an availability of node and link resources for the optical switched network (col. 3, lines 27-29, col. 5, lines 1-4, col. 6, line 65-66), and updating the link availability information (col. 8, lines 10-18).

Regarding claim 38, Fumagalli teaches prioritizing the applicable routes in the routing tree table based on a transmission-related criteria (col. 2, lines 24-27, col. 4, lines 51-56, col. 10, lines 45-51).

6. Claims 4-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 24-35 are allowed over prior art of record.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034.

The examiner can normally be reached on 9 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


M. R. SEDIGHIAN
PRIMARY EXAMINER